Serial No.: 10/619.989

LISTING OF THE CLAIMS

2 CLAIMS

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- 3 What is claimed is:
- 4 1. (previously presented) An apparatus comprising:
- 5 a buffer for storing indications of events generated by a plurality of ports of a peripheral device,
- 6 events include at least one of any of the following: an interrupt; an internal flag; a status indication
- 7 of completion of the read operation; an indication that a new header is waiting; an indication that
- 8 a packet header is ready; an indication triggered at an end of header processing, a descriptor, or a
- 9 set of descriptors: a completion indication as a received packet which includes an
- 10 acknowledgment; an indication of reception of a frame for transmission; an indication that a
- 11 EventMask bit is cleared, an indication that the EventMask bit is cleared; an indication that a
- 12 predetermined minimum number of event completed, said apparatus for transferring interrupts
- from the peripheral device to a host computer system, and
- 14 a controller having a preset condition for an application, said preset condition comprising one of:
- 15 a determination that the buffer is full; a determination that at least a predetermined plurality of
- 16 indications is stored in the buffer; a predetermined period has elapsed; and a determination that at
- 17 least one indication is stored in the buffer and that a predetermined period has elapsed, said
- 18 controller for, in response to a preset condition being met based on said indications, generating a
- 19 control data block comprising a payload portion having a plurality of fields each corresponding to
- a port from said plurality of ports and a header portion having an identifier for identifying the
- 21 control data block, moving the contents of the buffer to the payload portion of the control data
- 22 block, and sending the control data block to the host computer system via one port of the plurality
- 23 of ports.
- 24 2. (original) An apparatus as claimed in claim 1, wherein the preset condition comprises a
- 25 determination that the buffer is full

- 1 3. (original) An apparatus as claimed in claim 1, wherein the preset condition comprises a
- 2 determination that at least a predetermined plurality of indications is stored in the buffer and that a
- 3 predetermined period has elapsed.
- 4. (original) An apparatus as claimed in claim 1, wherein the preset condition comprises a
- 5 determination that at least one indication is stored in the buffer and that a predetermined period
- 6 has elapsed.
- 7 5. (Previously presented) An apparatus as claimed in claim 1, wherein the header portion
- 8 comprises a count indicative of the number of indications included in the payload portion.
- 9 6. (original) An apparatus as claimed in claim 1, wherein the header portion comprises a time of
- 10 day stamp.
- 7. (original) An apparatus as claimed in claim 1, wherein the buffer comprises a first in first out
- 12 memory buffer.
- 13 8. (previously presented) A communications device comprising the apparatus as claimed in claim
- 14 1.
- 15 9. (previously presented) A data communications network interface comprising the
- 16 communications device as claimed in claim 8
- 17 10. (previously presented) An apparatus as claimed in claim 1, further comprising:
- 18 a host processing system having a memory, a data communications interface for communicating
- 19 data between the host computer system and a data communications network, forming a data
- 20 processing system for controlling flow of interrupts from the data communication interface to the
- 21 memory of the host processing system.

- 1 11. (previously presented) A method comprising transferring interrupts from a peripheral device
- 2 to a host computer system, the peripheral device having a plurality of ports, the steps of
- 3 transferring interrupts comprising:
- 4 storing interrupts generated by said ports of the peripheral device in a buffer;
- 5 determining if a preset condition is met, said preset condition comprising any of: a determination
- 6 that the buffer is full; a determination that at least a predetermined plurality of indications is stored
- 7 in the buffer; a predetermined period has elapsed; and a determination that at least one indication
- 8 is stored in the buffer and that a predetermined period has elapsed, said controller for, in response
- 9 to a preset condition being met based on said indications;
- 10 in response to the preset condition being met, generating a control data block comprising a
- 11 payload portion having a plurality of fields each corresponding to a different port from said
- 12 plurality of ports and a header portion having an identifier for identifying the control data block;
- 13 moving the contents of the buffer to the corresponding fields of the payload portion; and
- sending the control data block to the host computer system via one of the ports.
- 15 12. (original) A method as claimed in claim 11, wherein the step of determining if the preset
- 16 condition is met comprises determining if the buffer is full.
- 17 13. (previously presented) A method as claimed in claim 11, wherein the step of determining if the
- 18 preset condition is met comprises determining if at least a predetermined plurality of indications is
- 19 stored in the buffer and if a predetermined period has elapsed, indications include at least one of
- any of the following: an interrupt; an internal flag; a status indication of completion of the read
- 21 operation; an indication that a new header is waiting; an indication that a packet header is ready;
- an indication triggered at an end of header processing, a descriptor, or a set of descriptors; a
- 23 completion indication as a received packet which includes an acknowledgment; an indication of

- 1 reception of a frame for transmission; an indication that a EventMask bit is cleared, an indication
- 2 that the EventMask bit is cleared; an indication that a predetermined minimum number of event
- 3 completed...
- 4 14. (previously presented) A method as claimed in claim 12, wherein the step of determining if the
- 5 preset condition is met comprises determining if at least one indication is stored in the
- 6 buffer and if a predetermined period has elapsed.
- 7 15. (previously presented) A method as claimed in claim 12, wherein the header portion comprises
- 8 a count indicative of the number of indications included in the payload portion.
- 9 16. (original) A method as claimed in claim 11, wherein the buffer comprises a first in first out
- 10 memory buffer.
- 11 17. (previously presented) A computer program product comprising a computer usable medium
- 12 having computer readable program code means embodied therein for causing transfer of
- 13 interrupts, the computer readable program code means in said computer program product
- 14 comprising computer readable program code means for causing a computer to effect all functions
- 15 of the apparatus of claim 1.
- 16 18. (previously presented) A computer program product comprising a computer usable medium
- 17 having computer readable program code means embodied therein for causing data processing, the
- 18 computer readable program code means in said computer program product comprising computer
- 19 readable program code means for causing a computer to effect all functions of the apparatus of
- 20 claim 10.
- 21 19. (previously presented) An article of manufacture comprising a computer usable medium
- 22 having computer readable program code means embodied therein for causing transfer of
- 23 interrupts, the computer readable program code means in said article of manufacture comprising
- 24 computer readable program code means for causing a computer to effect all steps of the method
- 25 of claim 11.

- 1 20. (previously presented) A program storage device readable by a machine, tangibly embodying
- 2 a program of instructions executable by the machine to perform method steps for transferring
- 3 interrupts, said method steps comprising all steps of the method of claim 11.
- 4 21. (previously presented) An apparatus as claimed in claim 1, wherein:
- 5 the preset condition comprises at least one of:
- 6 a determination that the buffer is full.
- 7 a determination that at least a predetermined plurality of indications is stored in the buffer
- 8 and that a predetermined period has elapsed, and
- 9 determination that at least one indication is stored in the buffer and that a predetermined
- 10 period has elapsed;
- 11 the header portion comprises a count indicative of the number of indications included in the
- 12 payload portion;
- 13 the header portion comprises a time of day stamp; and
- 14 the buffer comprises a first in first out memory buffer.
- 15 22. (previously presented) An apparatus as claimed in claim 21, further comprising:
- 16 a host processing system having a memory, a data communications interface for communicating
- 17 data between the host computer system and a data communications network, forming a data
- 18 processing system for controlling flow of interrupts from the data communication interface to the
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memory of the host processing system.